

### REMARKS

The Examiner provides a number of restrictions and rejections; we list them here in the order in which they are addressed.

I. Claims 27-29 and 31-35 are rejected under 35 U.S.C. §112, first paragraph, as allegedly being based on a disclosure that is not enabling.

II. Claims 27-29 and 31-35 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention.

III. Claims 27-29 and 31-34 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Kupper *et al.* (U.S. 6,813,518).

IV. Claim 35 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kupper *et al.*

V. Claims 27-29 and 31-35 are rejected under 35 U.S.C. §101 as allegedly being unpatentable on the grounds of non-statutory obviousness-type double patenting over claims 1-17 of U.S. Patent No. 7,206,633.

**I. Claims 27-29 and 31-35 are based on an enabling disclosure.**

The Examiner argues that the specification, but not the claims, disclose the essential element of providing simultaneous ATP pulses to the atrium and ventricle, and that this alleged omission renders the claims not enabled. The Applicants disagree. Nonetheless, without acquiescing but to further prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims in the future, the Applicants have amended Claim 27 such that it now recites that simultaneous ATP pulses are provided to the atria and ventricles. As indicated by the Examiner, support for such amendments may be found in the specification, at for example, page 3, lines 13-14 and 24-25; page 4, lines 27-28; page 5, lines 5-7; and page 23, lines 23-26.

In light of such amendments the Applicants respectfully request that the present rejection of Claim 27, and Claims 28-29 and 31-35 that depend therefrom, be withdrawn.

**II. Claims 27-29 and 31-35 are not indefinite.**

The Examiner argues that Claims 27-29 and 31-35 are indefinite based on an alleged omission that amounts to a gap between the recited elements. The Applicants disagree, especially in light of the fact that the present claims are directed towards a device and not a process. Nonetheless, without acquiescing but to further prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims in the future, the Applicants have amended Claim 27 such that it now recites the atrial and ventricular pacing leads of dependent Claim 32 (which is hereby cancelled).

The Examiner also alleges that the implantable pacemaker “element” of Claim 27 is vague, and suggests that this term be deleted. The Applicants disagree that such term is vague. Nonetheless, without acquiescing but to further prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims in the future the Applicants have deleted the term “element” as suggested by the Examiner.

The Examiner further alleges that the phrase “the blanking period” as recited in Claim 27 lacks antecedent basis, and suggests that it be replaced with “a blanking period”. The Applicants disagree. Nonetheless, without acquiescing but to further prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims in the future, the Applicants have amended Claim 27 such that phrase “the blanking period” has been replaced with “a blanking period” as suggested by the Examiner.

The Examiner also argues that the term “an implantable defibrillator element” is vague. The Applicants disagree. Nonetheless, without acquiescing but to further prosecution, and hereby expressly reserving the right to prosecute the original (or similar) claims in the future, the Applicants have amended Claim 27 such that the term “element” has been deleted. To be clear, the term “defibrillator” is expressly defined in the specification, at for example page 9, lines 20-27. Applicants point out that - as per its definition - a defibrillator may further comprise (i.e. more limiting) a timing device.

The Examiner then argues that lines 2 and 7 are vague since the pulses have not been delivered for a result to be produced. The Applicants disagree. However, in the interest of furthering prosecution the Applicants have amended Claim 27 such that “initiate” is replaced with “deliver”.

Finally, the Examiner alleges that Claims 31 and 32 are vague and should state that the pacemaker or defibrillator further comprise leads to deliver the ATP pulses and sense the signal. The Applicants disagree. This point is moot, however, in regard to the now canceled Claim 32. As related to Claim 31, the Applicants respectfully contend that the Examiner has misinterpreted the role/function of the defibrillation leads. Specifically, the atrial and ventricular defibrillation leads are distinct from the pacing and sensing leads (which deliver ATP pulses and sense the signal, respectively). That is, pacing leads pace, sensing leads sense and defibrillation leads defibrillate.

Based on the arguments and amendments provided above, the Applicants respectfully contend that the rejection of Claims 27-29, 31 and 33-35 is improper and should be withdrawn.

### **III. Claims 27-29 and 31-34 are not anticipated by Kupper *et al.***

The Examiner alleges that Kupper *et al.* anticipates the present claims based on the ability to sense the first atrial or ventricular depolarization.

Kupper discloses a pacemaker/defibrillator to deliver simultaneous pacing burst pulses to the atrium and ventricles when a tachycardia is detected (e.g. abstract, figures 6, 7, col. 11, line 53) and thereafter senses for the first atrial or ventricular depolarization (e.g. col. 11, line 64, figure 3, element 74/58) to determine the first depolarization to provide different intervals (e.g. escape intervals, col. 10). *Office Action*, page 4, ¶3.

The Applicants disagree. Unlike the present claims, Kupper *et al.* merely senses depolarization (either atrial or ventricular) but does not determine the source of such depolarization. Indeed, the paragraph cited by the Examiner (indeed the entire reference) is silent on determining the source of a depolarization – and, in fact, never uses the word “first”.

Following delivery of the fibrillation or tachycardia therapy, microprocessor **51** returns the device to a cardiac pacing mode and awaits the next successive interrupt due to pacing or the occurrence of a sensed atrial or ventricular depolarization. *Kupper et al. col. 11, lines 61-65.*

Clearly the microprocessor of *Kupper et al.* merely detects “the next” electrical event, the source of which may be the atria or ventricles, but does not (and cannot) distinguish between the two, as is clearly recited in Claim 27.

The Applicants further contend that the present DEVICE claims do not (and should not) require a classification step to further define the elements recited therein, as indicated by the Examiner.

NOTE, the claim does not state that the determination of the depolarization is used to classify the origin of the arrhythmia. *Office Action, page 4.*

The Applicants contend that reciting such a classification step would not provide additional substantive feature(s) to the claims.

Finally, the Applicants disagree that the disclosed “escape intervals” of *Kupper et al.* have any bearing on the instant claims. This fact is irrelevant, however, in light of the other shortcomings of this reference (discussed above).

Based on the preceding arguments, the Applicants contend that *Kupper et al.* does not anticipate Claims 27-29, 31 and 33-35. The Applicants, therefore, respectfully request that the Examiner withdraw the present rejection.

#### **IV. Claim 35 is not obvious in view of *Kupper et al.***

The Examiner further alleges that Claim 35 is obvious in view of *Kupper et al.* along with official notice that IMDs use quadripolar-sensing leads. The Applicants disagree. This point is irrelevant, however, in view of the shortcomings of *Kupper et al.* detailed above. Therefore, the Applicants respectfully request that the Examiner withdraw the present rejection.

**V. Claims 27-29 and 31-35 are patentably distinct from claims 1-17 of U.S. Patent No. 7,206,633.**

The Examiner cites 35 U.S.C. §101 in support of this statutory type (i.e. "same invention") double patenting rejection, but then explains the rejection on the grounds of non-statutory obviousness-type double patenting. In view of the Examiner's supporting arguments, the Applicants assume that the present rejection is based on the latter. Regardless, the Applicants disagree. First, the present application only claims a device while U.S. 7,206,633 recites entirely method claims. Second, since both the present application and U.S. 7,206,633 claim priority to Provisional Application 60/427,712 filed on 11/20/2002 the Applicants are not required to file a terminal disclaimer.

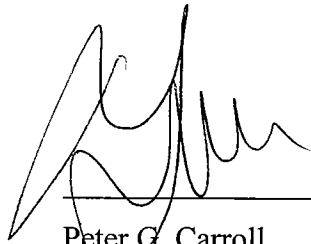
Based on the arguments provided above, the Applicants respectfully request that the present rejection of Claims 27-19, 31 and 33-35 be withdrawn.

**CONCLSION**

Based on the arguments provided above, Applicants believe that the Claims 27-29, 31 and 33-35 are in condition for allowance. Should the Examiner believe a telephone interview would aid in the prosecution of this application, the Applicants encourage the Examiner to call the undersigned at 781.828.9870.

Respectfully submitted,

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